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Topics in Minority Health

Behavioral Risk Factor Survey of Vietnamese — California, 1991

Since 1975, an estimated 979,700 refugees from Vietnam and other Southeast Asian countries have immigrated to the United States (L. Bussert, Office of Refugee Resettlement, U.S. Department of Health and Human Services, personal communication, 1991). Although public health agencies have reported extensively on the occurrence of infectious diseases in these populations (1–4), the prevalence of risk factors for noninfectious health concerns (e.g., heart disease, cancer, and unintentional injuries) have not been well defined. To characterize risk factors for selected noninfectious diseases and injuries among the estimated 280,200 Vietnamese who have relocated to California, the University of California, San Francisco, and the California Department of Health Services developed a Vietnamese-language version of CDC's Behavioral Risk Factor Surveillance System (BRFSS) for use in a computer-assisted telephone interviewing (CATI) system. This report summarizes findings from the 1991 survey and compares them with data for the general California or U.S. population.

The questionnaire used for this survey was modified from the BRFSS for cultural appropriateness, translated into the Vietnamese language, backtranslated, and pre-tested. The questionnaire included 96 questions covering 10 target areas: socio-demographics, acculturation, nutrition, exercise, tobacco use, alcohol consumption, hypertension, cholesterol, safety-belt use, and cancer screening. During February and March 1991, the investigators interviewed randomly selected Vietnamese adults aged ≥ 18 years living in private residences in California. The sampling frame consisted of 3988 Vietnamese surnames that had been randomly selected from a data-base listing of Vietnamese surnames from state telephone directories and motor-vehicle registrations. Households were telephoned, and respondents were randomly selected after enumeration of household members.

Of 1705 eligible persons who were contacted, 1011 (59%) agreed to participate. The average age of respondents was 39.8 (standard deviation [SD]: 13.3) years. Most

Vietnamese — Continued

(55%) respondents were men; 30% of respondents were unmarried. The average year of immigration was 1981 (SD: 4.4 years). Less than half (45%) had completed high school; 80% reported fewer than 4 years of college. Nearly half (43%) had no health insurance; 28% lived in households with incomes below the poverty level (based on 1991 U.S. Department of Labor definitions by family size). Most (77%) reported limited or no English fluency.

When compared with the total population of California or the United States, prevalence rates for several behavioral risk factors were higher for Vietnamese who had resettled in the United States (Table 1), including rates of smoking (men), no exercise (both sexes), never having had cholesterol checked (both sexes), not knowing cholesterol level (women), never having had recommended breast and cervical cancer screening tests (women), and never having had rectal exams (both sexes). However, rates of alcohol consumption and hypertension (both sexes) and safety-belt nonuse (men) were lower than for the total population of California.

The likelihood of having had a Papanicolaou smear was lower for women who had fewer than 4 years of college ($p<0.005$), women who were unmarried ($p<0.001$), and women who were more recent immigrants ($p<0.001$). Similarly, the likelihood of having had a breast examination was lower for women who were unmarried ($p<0.001$), were more recent immigrants ($p<0.001$), or had no health insurance ($p<0.02$). Failure to have had a mammogram was associated with more recent immigration ($p<0.03$) and income below the poverty level ($p<0.01$). Men were less likely to have had a rectal exam if they were more recent immigrants ($p<0.01$) and less likely to have had a stool occult blood test if they were more recent immigrants ($p<0.05$) or had limited English fluency ($p<0.002$).

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Editorial Note: Persons of Vietnamese origin are the most rapidly increasing segment of the Asian/Pacific Islander ethnic group in the United States (5). Of the more than 600,000 Vietnamese living in the United States, nearly half (46%) reside in California (6).

The findings in this report indicate that the behavioral risk-factor profiles of the Vietnamese in California differ markedly from those of the total population in that state. In particular, the high prevalence rate of cigarette smoking for men and the low prevalence rates of use of cancer screening tests for both sexes are consistent with previous findings (7). Moreover, based on a study of cancer patterns in Los Angeles County, proportional incidence ratios (PIRs) for cancers of the lung and rectum were higher for Vietnamese men than for all other racial/ethnic groups but lower for cancers of the colon and prostate. Among Vietnamese women, PIRs were higher for cancer of the cervix but lower for cancers of the colon, rectum, breast, and lung (8). Because these data indicate that Vietnamese in California are at higher risk for some chronic diseases, ethnically tailored health promotion programs are needed to reduce these risks and lower barriers to preventive services. In addition, cancer screening programs should target more recent immigrants who are least likely to have received recommended cancer screening tests.



TABLE 1. Risk-factor prevalence estimates for Vietnamese in the Behavioral Risk Factor Surveillance System (BRFSS), 1991

Risk factor	Vietnamese in California		
	Men		
	No. surveyed	%	(95% CI) [§]
Current smoker	557	35	(31-39)
Former smoker	557	14	(11-17)
Never smoker	557	51	(47-56)
Current drinker [†]	557	50	(45-54)
Heavier drinker ^{**}	557	3	(2- 5)
Binge drinker ^{††}	557	11	(8-14)
Drinking and driving	557	4	(3- 6)
No exercise ^{§§}	556	40	(36-44)
Safety-belt nonuse ^{¶¶}	552	14	(11-17)
Self-reported hypertension ^{***}	550	10	(8-13)
Under treatment (medication)	56	83	(50-75)
Cholesterol never checked	554	56	(52-60)
Cholesterol checked and			
Was never told cholesterol level	222	53	(46-59)
Didn't know cholesterol level	222	59	(53-65)
Reported hypercholesterolemia ^{†††}	243	38	(32-44)
Reported hypercholesterolemia and under treatment (medication)	90	46	(35-56)
Never had physical breast exam ^{§§§}	—	—	—
Never had mammogram ^{¶¶¶}	—	—	—
Never had Papanicolaou smear ^{****}	—	—	—
Never had rectal exam ^{††††}	246	70	(64-75)
Never had stool occult blood test ^{§§§§}	111	65	(56-74)
Never had proctoscopy ^{§§§§}	114	82	(74-89)

*Source for all variables except rectal exam, stool occult blood test, and proctoscopy for California are based on a sample of 1253 males and 1448 females and are representative of the general population.

†Source for rectal exam, stool occult blood test and proctoscopy: National Health and Medical Examination Survey.

§Confidence interval.

†≥1 drink during past month.

**≥60 drinks during past month.

††≥5 drinks on ≥1 occasion during past month.

§§No physical activity outside of work during past month.

¶¶Sometimes, seldom, or never wore safety belts.

***Told had high blood pressure on ≥2 occasions.

in California and the total California* or U.S.† population –

Use in California			California or United States			
Women			Men		Women	
No. surveyed	%	(95% CI)	%	(95% CI)	%	(95% CI)
454	<1	(0– 2)	22	(19–24)	19	(16–21)
454	2	(0– 3)	34	(31–37)	21	(19–23)
454	98	(97–99)	43	(40–47)	61	(58–63)
453	11	(8–14)	69	(66–72)	51	(48–54)
445	0	(0– 2)	8	(6– 9)	1	(1– 2)
448	<1	(0– 2)	26	(24–29)	8	(6–10)
448	<1	(0– 2)	5	(4– 6)	2	(1– 2)
453	50	(46–55)	24	(21–26)	28	(25–31)
439	10	(7–13)	17	(14–19)	10	(8–12)
443	9	(6–11)	13	(11–15)	16	(13–18)
38	76	(63–90)	60	(51–68)	70	(63–77)
451	55	(50–59)	41	(38–48)	35	(32–37)
192	67	(60–73)	22	(18–25)	23	(20–26)
192	76	(69–82)	55	(50–59)	57	(54–61)
203	32	(26–38)	29	(26–33)	28	(25–32)
64	39	(27–51)	15	(10–20)	17	(12–22)
452	47	(42–51)	–	–	11	(9–14)
195	48	(41–55)	–	–	27	(23–30)
434	53	(49–58)	–	–	6	(4– 7)
195	66	(59–72)	42	(40–44)	43	(41–45)
99	62	(52–71)	64	(61–67)	64	(62–66)
99	82	(74–89)	78	(75–81)	80	(78–82)

roctoscopy: California BRFSS, 1990. Prevalence estimates and confidence intervals
and are weighted to the 1986 California population.
al Health Interview Survey, 1987.

Ever told that blood cholesterol was high.

Women aged ≥18 years.

Women aged ≥40 years.

Women aged ≥18 years who have not had a hysterectomy.

Men and women aged ≥40 years.

Men and women aged ≥50 years

Vietnamese – Continued

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Vietnamese — Continued

The findings in this report have at least three limitations. First, all prevalence estimates were based on self-reports that were not independently validated. Second, because the CATI methodology excluded potential respondents without telephones, certain information biases might have been introduced. Finally, although these findings can be generalized to all Vietnamese living in California, they may not represent valid estimates of the behavioral risk factors for Vietnamese who reside in other states.

Although ethnic populations may be at higher risk for certain behaviors and health outcomes, national and state health risk-factor surveys often do not sufficiently sample ethnic populations to ensure reliable statistical estimates. Because of these limitations in reliable baseline data, national health objectives for the year 2000 could not be established for Asian/Pacific Islanders and certain other ethnic populations (9). However, the rapid evolution of the demographic composition of the U.S. population impels the collection of such ethnicity-specific risk-factor data. The standard CDC BRFSS methodology is one such approach that can be adapted to survey an ethnic community by using a culturally appropriate and native-language instrument.

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*Health Objectives for the Nation***Hazardous-Waste Sites:
Priority Health Conditions and Research Strategies — United States**

Uncontrolled disposal sites containing hazardous waste and other contaminants have created national environmental problems (1). Because of potential health problems associated with the more than 33,000 hazardous-waste sites in the United States, the Agency for Toxic Substances and Disease Registry (ATSDR)—as part of its federally legislated mandate—has developed a list of seven priority health conditions (PHCs)* to 1) assist in evaluating potential health risks to persons living near these sites and 2) determine program and applied human health research activities in-

*Broad categories of diseases, disorders, or dysfunctions for which human health studies and chemical-specific research are needed.

Priority Health Conditions – Continued

volving hazardous substances identified at the sites. This report summarizes the development and intended applications of the seven PHCs.

ATSDR was created by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (as amended by the Superfund Amendments and Reauthorization Act of 1986). The mission of ATSDR is to prevent or mitigate adverse human health effects and diminished quality of life resulting from exposure to hazardous substances in the environment (2). Therefore, ATSDR has initiated medical-evaluation efforts and programs to address site- and substance-specific information needs. These programs include conducting public health assessments of individual hazardous-waste sites and health studies and establishing public health surveillance systems and registries of persons exposed to hazardous substances.

Since 1986, ATSDR has conducted public health assessments for more than 1200 of the nearly 1300 sites identified on the Environmental Protection Agency's National Priorities List (NPL) and has conducted more than 85 health-study activities. In addition, ATSDR has evaluated the chemicals that pose the greatest human health hazards at NPL sites; the list of 275 hazardous substances was based on 1) the frequency with which a chemical was found at NPL sites, 2) the chemical's toxicity, and 3) the likelihood of human exposure to the chemical.

ATSDR used information derived from health studies, public health assessments, and toxicologic profiles to develop a list of seven PHCs—birth defects and reproductive disorders, cancers (selected sites), immune function disorders, kidney dysfunction, liver dysfunction, lung and respiratory diseases, and neurotoxic disorders.

In addition, ATSDR determined that the following research approaches should be used to examine PHCs:

- **Evaluation of the occurrence of adverse health effects in specific populations.** This includes ecologic epidemiology studies and evaluation of the incidence or prevalence of disease; disease symptoms; self-reported health concerns; and biological markers of disease, susceptibility, or exposure.
- **Identification of risk factors for adverse health effects from exposure to hazardous-waste sites.** This includes hypothesis-generated cohort or case-control studies of potentially affected populations to identify 1) links between exposures and adverse health effects and 2) risk factors that may be mitigated by prevention actions.
- **Development of methods to diagnose adverse health effects.** This includes medical research to identify and validate new biological tests to be used to evaluate disease occurrence in potentially affected populations.
- **Diagnosis of adverse health effects in persons.** This includes clinical-based research to identify and evaluate diagnostic and treatment regimens that may benefit persons who develop adverse health effects resulting from exposure to hazardous substances.

Reported by: Div of Health Studies, Agency for Toxic Substances and Disease Registry.

Editorial Note: In the United States, approximately 2 million persons live within a 1-mile radius of the nearly 1300 hazardous-waste sites on the NPL. One national health objective for the year 2000 is to eliminate substantial health risks from NPL hazardous-waste sites through clean-up efforts that would eliminate immediate and substantial health threats, based on health assessments (objective 11.14) (3).

To further evaluate health risks for exposed populations, ATSDR will use the seven PHCs to assess the occurrence of adverse health effects and the relation between

Priority Health Conditions — Continued

effects and specific exposures to hazardous substances. In addition, the PHCs should assist public health officials in setting priorities and effectively directing national environmental public health epidemiologic research efforts. Further studies should provide critical information that can be used to reduce the burden of adverse health effects resulting from exposures to hazardous substances.

ATSDR encourages public health, medical, and university-based researchers to address these priority health conditions; the results of such research should enable health professionals to provide health information to persons exposed to hazardous substances or affected by adverse health effects. Additional information about the PHC approach is available from the Division of Health Studies, ATSDR, telephone (404) 639-6200.

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*Topics in Minority Health***Prevalence of Tuberculous Infection
Among U.S. Residents of Cuban Descent — Dade County, Florida, 1982–84**

The strategic plan to eliminate tuberculosis (TB) in the United States emphasizes the need for improved understanding of the epidemiology of tuberculous infection among recent immigrants and other groups at increased risk for TB (1). Data regarding the prevalence of tuberculous infection are limited for groups such as U.S. residents of Cuban descent (i.e., Cubans) and other minority populations. To estimate the prevalence of tuberculous infection among self-reported Cubans, CDC's National Center for Health Statistics analyzed data from tuberculin skin testing performed on all examinees aged 6 months to 74 years in Dade County (which includes incorporated Miami), Florida (1990 population: 1.9 million; Hispanic population: 950,000), during the first Hispanic Health and Nutrition Examination Survey (HHANES), 1982–84* (2).

As part of HHANES, each person examined was tested with an intradermal injection of 5 tuberculin units of purified protein derivative. The presence of induration was assessed by a nurse 48–72 hours later; induration of ≥ 10 mm was considered a positive test. Because HHANES employed a complex survey design, sampling weights were used to estimate the prevalence of tuberculous infection; variances of tuberculous infection rates were estimated by multiplying the variance estimates by an average design effect (2). The prevalence of tuberculous infection was age-adjusted to the 1980 U.S. census population. Because prior vaccination with bacille Calmette-Guérin (BCG) vaccine complicates interpretation of tuberculin skin

*The most recent period for which data are available.

Tuberculous Infection — Continued

tests, persons with a scar suggesting prior BCG vaccination were excluded from the analysis. Ethnicity and country of birth were self-reported by participants.

Of the 901 persons of Cuban descent who were skin tested, induration was assessed in 870 (97%); 458 (53%) were female. The mean age for the 870 persons was 37 years. The overall age-adjusted prevalence of tuberculous infection was 9.7% for males and 4.9% for females ($p < 0.05$). For males, the prevalence rate increased directly with age, from 4.5% [95% confidence interval (CI) = 1.1%–7.9%] for those aged 1–19 years to 14% [95% CI = 8.6%–19.5%] for those aged 45–74 years (Figure 1). All females aged 1–19 years were skin-test negative; the prevalence rate was stable for females aged 20–44 years and 45–74 years (7.6% [95% CI = 2.1%–13.1%] and 7.8% [95% CI = 3.9%–11.6%], respectively) (Figure 1).

Of the 870 persons, 691 (79%) were born in Cuba; 160 (18%), in the United States; and 19 (2%), in other countries. The age-adjusted prevalence rate of tuberculous infection for persons born in Cuba (9.7%) was greater than for those born in the United States (1.3%). This pattern also characterized specific age groups: 5.9% and 10.3%, respectively, for persons ≤ 19 and 20–74 years of age who were born in Cuba, compared with 0.7% and 6.7%, respectively, for persons born in the United States.

The prevalence rate of tuberculous infection for Cubans who were smokers* (12.0%) was almost twice that for nonsmokers (7.1%) and varied by sex: for males, 14.4% for current smokers versus 8.9% for nonsmokers; for females, 13.6% for current smokers versus 6.1% for nonsmokers.

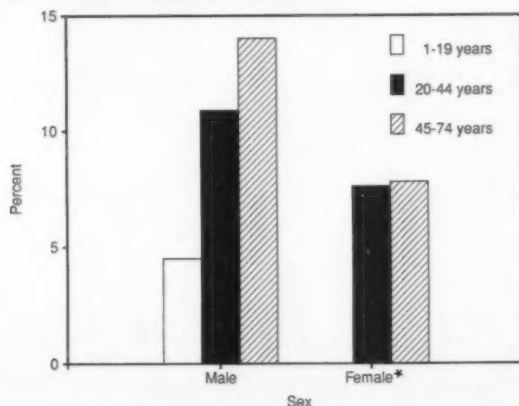
Reported by: Medical Statistics Br, Div of Health Examination Statistics, National Center for Health Statistics, CDC.

Editorial Note: Based on the 1990 U.S. census estimates of the population of Cubans in the United States (3) and the TB prevalence data collected in the 1982–84 HHANES, approximately 76,000 Cubans in the United States could be infected with TB. This

(Continued on page 81)

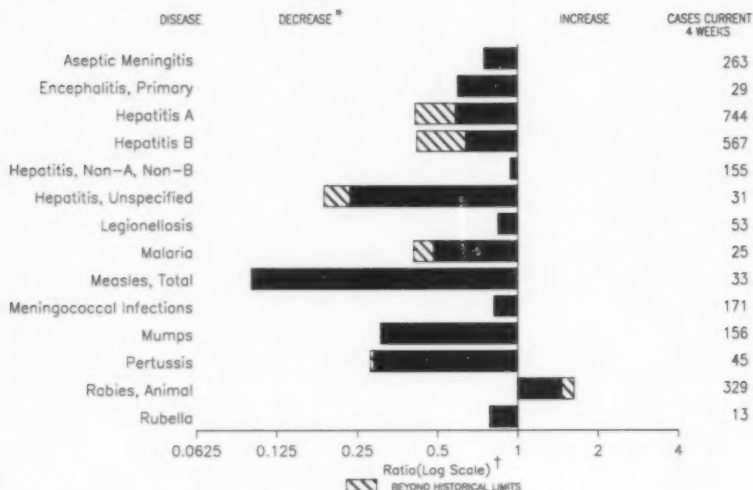
*Defined as persons who had smoked at least 100 cigarettes in their lifetimes.

FIGURE 1. Prevalence rate of tuberculous infection among U.S. residents of Cuban descent — Dade County, Florida, 1982–84



*The prevalence rate for females aged 1–19 years was 0.

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending February 1, 1992, with historical data — United States



*The decreases beyond historical limits in disease reports for the past 4 weeks reflect a backlog of data transmission for 1991 cases in many reporting areas and delayed transmission of cases due to a change to a new system in some states beginning in 1992.

†Ratio of current 4-week total to the mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending February 1, 1992 (5th Week)

	Cum. 1992		Cum. 1992
AIDS	4,164	Measles: imported	-
Anthrax	-	indigenous	33
Botulism: Foodborne	-	Plague	-
Infant	2	Poliomyelitis, Paralytic*	-
Other	-	Psittacosis	6
Brucellosis	2	Rabies, human	-
Cholera	-	Syphilis, primary & secondary	2,928
Congenital rubella syndrome	-	Syphilis, congenital, age < 1 year	-
Diphtheria	-	Tetanus	2
Encephalitis, post-infectious	4	Toxic shock syndrome	17
Gonorrhea	43,389	Trichinosis	1
<i>Haemophilus influenzae</i> (invasive disease)	116	Tuberculosis	1,447
Hansen Disease	4	Tularemia	7
Leptospirosis	1	Typhoid fever	13
Lyme Disease	138	Typhus fever, tickborne (RMSF)	8

*Nine suspected cases of poliomyelitis have been reported in 1991; 4 of the 8 suspected cases in 1990 were confirmed, and all were vaccine associated.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending February 1, 1992, and February 2, 1991 (5th Week)

Reporting Area	AIDS	Aseptic Meningi- tis	Encephalitis		Gonorrhea		Hepatitis (Viral), by type				Legionel- osis	Lyme Disease
			Primary	Post-in- fectious			A	B	NA,NB	Unspeci- fied		
					Cum. 1992	Cum. 1992						
UNITED STATES	4,164	383	39	4	43,389	55,222	1,100	845	223	38	76	138
NEW ENGLAND	71	57	3	-	1,045	1,920	47	83	4	7	10	29
Maine	6	5	-	-	10	6	6	-	-	-	2	-
N.H.	6	1	-	-	-	28	4	5	-	-	1	4
Vt.	-	2	2	-	1	9	-	1	1	-	1	1
Mass.	2	15	1	-	413	633	28	59	3	7	5	2
R.I.	10	34	-	-	88	100	5	5	-	-	1	18
Conn.	47	-	-	-	533	1,144	4	13	-	-	-	4
MID. ATLANTIC	876	28	2	-	1,937	6,839	62	65	6	-	7	70
Upstate N.Y.	145	-	-	-	-	1,284	-	-	-	-	-	-
N.Y. City	348	8	-	-	333	1,918	21	2	1	-	1	-
N.J.	283	-	-	-	350	929	1	4	2	-	-	3
Pa.	100	20	2	-	1,254	2,708	40	59	3	-	6	67
E.N. CENTRAL	414	77	8	-	7,824	10,080	139	165	19	2	23	11
Ohio	108	32	4	-	2,787	3,515	55	33	15	-	15	10
Ind.	28	13	-	-	859	1,118	60	67	-	1	2	1
Ill.	255	-	-	-	3,585	2,606	4	2	-	-	-	-
Mich.	14	32	4	-	460	2,163	12	53	1	1	6	-
Wis.	9	-	-	-	133	678	8	10	3	-	-	-
W.N. CENTRAL	178	21	2	1	2,437	2,845	93	10	-	-	1	1
Minn.	26	1	-	-	288	173	6	2	-	-	-	-
Iowa	13	9	-	-	193	198	2	3	-	-	1	1
Mo.	82	-	-	-	1,530	1,828	-	-	-	-	-	-
N. Dak.	-	1	-	-	-	3	4	-	-	-	-	-
S. Dak.	-	1	-	1	17	37	63	-	-	-	-	-
Nebr.	4	1	-	-	33	200	7	1	-	-	-	-
Kans.	53	8	2	-	376	406	11	4	-	-	-	-
S. ATLANTIC	1,050	68	10	2	16,839	16,993	86	146	19	5	13	9
Del.	7	5	2	-	142	171	-	6	-	-	-	2
Md.	176	16	1	-	1,647	1,726	18	45	3	4	3	1
D.C.	52	-	-	-	764	1,026	1	5	-	-	-	-
Va.	8	11	2	1	2,030	1,393	7	11	2	1	1	5
W. Va.	7	-	-	-	105	124	1	4	-	-	-	-
N.C.	89	12	5	-	1,849	3,457	8	32	10	-	2	-
S.C.	26	2	-	-	1,185	1,590	5	5	-	-	6	-
Ge.	109	10	-	-	7,036	4,197	10	11	1	-	-	-
Fla.	596	12	-	1	2,081	3,309	16	27	3	-	1	1
E.S. CENTRAL	194	33	-	-	3,845	4,566	20	78	129	-	5	2
Ky.	22	17	-	-	472	506	6	8	-	-	2	1
Tenn.	59	8	-	-	1,318	1,386	6	55	125	-	3	1
Ala.	84	8	-	-	895	1,630	4	15	4	-	-	-
Miss.	29	-	-	-	1,160	1,044	4	-	-	-	-	-
W.S. CENTRAL	422	5	-	-	4,251	5,632	43	31	4	1	-	2
Ark.	30	5	-	-	192	579	10	10	-	-	-	1
La.	79	-	-	-	853	1,025	-	-	-	-	-	-
Okla.	41	-	-	-	426	605	33	21	4	1	-	1
Tex.	272	-	-	-	2,780	3,423	-	-	-	-	-	-
MOUNTAIN	101	9	2	-	923	1,156	176	42	6	5	8	-
Mont.	1	-	1	-	8	5	8	3	-	-	1	-
Idaho	-	-	-	-	8	11	5	8	-	-	-	-
Wyo.	-	-	-	-	3	4	-	1	3	-	-	-
Colo.	38	1	1	-	213	336	34	7	2	5	-	-
N. Mex.	10	1	-	-	79	99	10	6	-	-	-	-
Ariz.	20	7	-	-	458	470	108	8	1	-	3	-
Utah	11	-	-	-	17	35	3	-	-	-	-	-
Nev.	21	-	-	-	137	196	8	9	-	-	4	-
PACIFIC	858	85	12	1	4,288	5,191	454	225	36	18	9	14
Wash.	30	-	-	-	331	503	20	17	3	-	3	-
Oreg.	47	-	-	-	121	200	31	21	6	-	-	-
Calif.	763	78	10	1	3,710	4,324	394	188	27	18	6	14
Alaska	4	1	2	-	87	92	1	1	-	-	-	-
Hawaii	14	6	-	-	39	72	8	-	-	-	-	-
Guam	-	-	-	-	12	-	1	-	-	2	-	-
P.R.	107	7	-	-	1	15	2	11	-	-	-	-
V.I.	1	-	-	-	6	40	-	1	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	2	-	-	-	-	-	-

N: Not notifiable

U: Unavailable

C.N.M.I.: Commonwealth of the Northern Mariana Islands

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending February 1, 1992, and February 2, 1991 (5th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin- gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total		Cum.		Cum.		Cum.		Cum.	
		Cum. 1992	1992	Cum. 1992	1992	Cum. 1992	Cum. 1991	Cum. 1992	1992	Cum. 1992	1992	Cum. 1992	Cum. 1991	1992	Cum. 1992
UNITED STATES	45	6	33	-	-	364	232	91	191	18	63	185	3	16	37
NEW ENGLAND	1	-	-	-	-	2	16	-	-	-	-	8	-	4	-
Maine	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
N.H.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vt.	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-
Mass.	1	-	-	-	-	-	7	-	-	-	-	1	-	-	-
R.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conn.	-	-	-	-	-	2	6	-	-	-	-	-	-	4	-
MID. ATLANTIC	4	1	2	-	-	210	5	4	9	6	8	25	-	-	2
Upstate N.Y.	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-
N.Y. City	1	1	1	-	-	15	2	-	-	-	-	-	-	-	2
N.J.	1	-	-	-	-	68	-	-	-	-	-	-	-	-	-
Pa.	2	-	1	-	-	127	3	4	9	6	8	14	-	-	-
E.N. CENTRAL	2	-	-	-	-	6	50	4	17	-	12	50	-	2	1
Ohio	-	-	-	-	-	-	8	-	5	-	-	18	-	-	-
Ind.	-	-	-	-	-	-	10	1	2	-	9	9	-	-	1
Ill.	-	-	-	-	-	4	19	-	4	-	-	15	-	2	-
Mich.	1	-	-	-	-	1	13	3	5	-	2	4	-	-	-
Wis.	1	-	-	-	-	1	-	-	1	-	1	4	-	-	-
W.N. CENTRAL	3	-	-	-	-	-	15	-	1	-	2	22	-	1	2
Minn.	1	-	-	-	-	-	2	-	-	-	-	8	-	-	-
Iowa	1	-	-	-	-	-	1	-	1	-	1	3	-	-	-
Mo.	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Nebr.	-	-	-	-	-	-	2	-	-	-	-	1	-	-	-
Kans.	1	-	-	-	-	-	10	-	-	-	1	2	-	-	-
S. ATLANTIC	9	5	9	-	-	2	41	72	113	5	11	7	1	1	-
Del.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Md.	5	-	-	-	-	-	3	3	13	1	7	-	-	-	-
D.C.	2	-	-	-	-	-	-	2	2	-	-	-	-	-	-
Va.	-	-	-	-	-	-	3	-	3	-	-	2	-	-	-
W. Va.	-	-	-	-	-	-	4	6	6	-	-	-	-	-	-
N.C.	-	-	-	-	-	-	10	20	20	4	4	4	-	-	-
S.C.	-	-	-	-	-	-	4	28	32	-	-	-	-	-	-
Ga.	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-
Fla.	1	5	9	-	-	2	10	13	37	-	-	1	1	1	-
E.S. CENTRAL	1	-	18	-	-	-	19	1	4	-	5	4	-	-	-
Ky.	-	-	18	-	-	-	9	-	-	-	-	-	-	-	-
Tenn.	1	-	-	-	-	-	3	1	1	-	-	3	-	-	-
Ala.	-	-	-	-	-	-	7	-	3	-	5	1	-	-	-
Miss.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W.S. CENTRAL	1	-	-	-	-	5	10	1	4	2	4	9	-	-	-
Ark.	-	-	-	-	-	5	4	-	3	1	3	-	-	-	-
La.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Okla.	1	-	-	-	-	-	-	-	-	-	-	6	-	-	-
Tex.	-	-	-	-	-	-	6	1	1	1	1	3	-	-	-
MOUNTAIN	5	-	-	-	-	27	12	2	13	-	6	27	-	-	1
Mont.	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	2	-	1	-	3	7	-	-	-
Wyo.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Colo.	2	-	-	-	-	-	2	-	2	-	1	3	-	-	-
N. Mex.	2	-	-	-	-	18	-	N	N	-	2	4	-	-	-
Ariz.	1	-	-	-	-	2	1	1	7	-	-	6	-	-	-
Utah	-	-	-	-	-	-	1	1	-	-	-	5	-	-	-
Nev.	-	-	-	-	-	7	4	-	2	-	-	-	-	-	1
PACIFIC	19	-	4	-	-	112	64	7	30	5	15	33	2	8	31
Wash.	2	-	-	-	-	-	8	-	2	-	-	-	-	-	-
Oreg.	1	-	1	-	-	-	14	N	N	1	3	4	-	-	-
Calif.	14	-	3	-	-	112	37	7	27	4	10	15	2	6	31
Alaska	-	-	-	-	-	-	3	-	-	-	-	5	-	-	-
Hawaii	2	-	-	-	-	-	2	-	1	-	2	9	-	2	-
Guam	-	U	-	U	-	-	-	U	1	U	-	-	U	-	-
P.R.	-	-	-	-	-	-	1	-	-	-	1	1	-	-	-
V.I.	-	U	-	U	-	-	-	U	3	U	-	-	U	-	-
Amer. Samoa	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
C.N.M.I.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-

*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable ¹International ²Out-of-state

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending February 1, 1992, and February 2, 1991 (5th Week)

Reporting Area	Syphilis (Primary & Secondary)		Toxic- shock Syndrome	Tuberculosis		Tula- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1992	Cum. 1991	Cum. 1992	Cum. 1992	Cum. 1991	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992
UNITED STATES	2,928	3,928	17	1,447	1,425	7	13	8	505
NEW ENGLAND	48	90	3	98	52	-	-	1	48
Maine	-	-	-	16	16	-	-	-	-
N.H.	-	1	2	-	-	-	-	-	-
Vt.	-	1	-	-	-	-	-	-	-
Mass.	16	48	1	82	11	-	-	1	-
R.I.	4	4	-	-	8	-	-	-	-
Conn.	28	36	-	-	17	-	-	-	48
MID. ATLANTIC	341	841	2	260	328	-	1	-	153
Upstate N.Y.	-	72	-	-	19	-	-	-	96
N.Y. City	186	336	-	210	236	-	-	-	-
N.J.	19	114	-	4	61	-	1	-	40
Pa.	136	319	2	46	12	-	-	-	17
E.N. CENTRAL	507	422	5	111	154	-	1	1	10
Ohio	62	39	2	17	50	-	1	1	-
Ind.	30	10	1	12	3	-	-	-	-
Ill.	264	207	-	60	89	-	-	-	1
Mich.	122	109	2	15	-	-	-	-	-
Wis.	29	57	-	7	12	-	-	-	9
W.N. CENTRAL	80	55	2	22	38	-	-	-	75
Minn.	7	7	1	8	1	-	-	-	29
Iowa	2	7	1	3	9	-	-	-	14
Mo.	70	41	-	11	18	-	-	-	-
N. Dak.	-	-	-	-	3	-	-	-	5
S. Dak.	-	-	-	-	1	-	-	-	-
Nebr.	1	-	-	-	1	-	-	-	-
Kans.	-	-	-	-	5	-	-	-	27
S. ATLANTIC	882	1,136	1	221	160	2	1	3	140
Del.	14	14	-	1	4	-	-	-	20
Md.	76	108	-	41	19	2	-	-	55
D.C.	66	68	-	7	17	-	1	-	3
Va.	68	68	-	8	13	-	-	-	9
W. Va.	3	3	-	9	7	-	-	-	3
N.C.	191	157	1	26	37	-	-	3	-
S.C.	135	163	-	22	20	-	-	-	10
Ga.	199	257	-	22	31	-	-	-	40
Fla.	130	298	-	85	12	-	-	-	-
E.S. CENTRAL	436	411	-	61	89	2	-	-	8
Ky.	13	7	-	23	22	1	-	-	4
Tenn.	77	203	-	-	1	-	-	-	-
Ala.	210	99	-	34	41	-	-	-	4
Miss.	136	102	-	4	26	-	-	-	-
W.S. CENTRAL	434	536	-	3	87	3	-	3	35
Ark.	58	19	-	3	13	1	-	2	4
La.	152	155	-	-	-	-	-	-	-
Okla.	18	20	-	-	2	2	-	1	31
Tex.	206	342	-	-	72	-	-	-	-
MOUNTAIN	70	67	2	35	44	-	-	-	9
Mont.	2	-	-	-	-	-	-	-	1
Idaho	1	2	-	3	-	-	-	-	-
Wyo.	-	1	-	-	-	-	-	-	7
Colo.	9	9	1	-	6	-	-	-	-
N. Mex.	7	3	-	6	-	-	-	-	-
Ariz.	29	52	1	19	27	-	-	-	1
Utah	1	-	-	-	10	-	-	-	-
Nev.	21	-	-	7	1	-	-	-	-
PACIFIC	130	370	2	636	473	-	10	-	27
Wash.	-	20	-	21	14	-	-	-	-
Oreg.	6	6	-	7	7	-	-	-	-
Calif.	124	343	2	602	430	-	10	-	27
Alaska	-	1	-	2	2	-	-	-	-
Hawaii	-	-	-	4	20	-	-	-	-
Guam	1	-	-	-	-	-	-	-	-
P.R.	7	16	-	-	4	-	-	-	3
V.I.	4	6	-	1	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	4	-	-	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending
February 1, 1992 (5th Week)

Reporting Area	All Causes, By Age (Years)						P ¹ / ₁ ² Total	Reporting Area	All Causes, By Age (Years)						P ¹ / ₁ ² Total
	All Ages	>65	45-64	25-44	1-24	<1			All Ages	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	719	511	115	59	17	17	64	S. ATLANTIC	1,430	940	267	153	32	37	108
Boston, Mass.	173	108	38	14	6	7	15	Atlanta, Ga.	211	124	38	36	6	7	7
Bridgeport, Conn.	56	44	3	6	2	1	5	Baltimore, Md.	365	228	87	40	4	6	37
Cambridge, Mass.	18	14	1	3	-	-	3	Charlotte, N.C.	116	80	18	13	4	1	7
Fall River, Mass.	34	25	6	3	-	-	1	Jacksonville, Fla.	119	77	19	14	4	5	12
Hartford, Conn.	78	49	15	8	3	3	4	Miami, Fla.	107	65	25	13	4	-	1
Lowell, Mass.	24	17	6	1	-	-	4	Norfolk, Va.	72	51	7	3	4	7	4
Lynn, Mass.	26	19	4	3	-	-	4	Richmond, Va.	87	54	18	12	1	2	11
New Bedford, Mass.	32	27	3	1	-	-	1	Savannah, Ga.	68	49	8	6	-	5	4
New Haven, Conn.	56	36	10	6	2	2	3	St. Petersburg, Fla.	84	68	11	3	1	1	3
Providence, R.I.	33	23	5	2	3	-	2	Tampa, Fla.	181	128	34	12	4	3	22
Somerville, Mass.	8	7	-	1	-	-	-	Washington, D.C.	U	U	U	U	U	U	U
Springfield, Mass.	65	48	12	5	-	-	8	Wilmington, Del.	20	16	2	1	-	-	-
Waterbury, Conn.	74	48	3	1	-	-	3	E.S. CENTRAL	925	600	196	68	30	31	72
Worcester, Mass.	74	56	9	5	1	3	7	Birmingham, Ala.	127	86	27	9	3	2	4
MID. ATLANTIC	2,784	1,902	499	258	56	68	165	Chattanooga, Tenn.	91	69	12	5	4	1	8
Albany, N.Y.	42	30	10	1	-	1	5	Knoxville, Tenn.	94	67	21	3	3	-	18
Allentown, Pa.	24	17	6	1	-	-	5	Louisville, Ky.	89	55	19	7	6	2	9
Buffalo, N.Y.	113	78	25	8	1	1	5	Memphis, Tenn.	181	104	42	20	1	9	5
Camden, N.J.	44	30	9	4	1	-	3	Mobile, Ala.	155	86	36	18	4	11	5
Elizabeth, N.J.	22	18	1	3	-	-	2	Montgomery, Ala.	54	37	13	1	-	3	4
Erie, Pa.	40	30	7	3	-	-	-	Nashville, Tenn.	134	96	26	5	4	3	19
Jersey City, N.J.	115	66	17	17	3	12	5	W.S. CENTRAL	1,794	1,151	339	176	80	48	122
New York City, N.Y.	1,374	912	255	144	32	31	61	Austin, Tex.	72	47	12	8	2	3	6
Newark, N.J.	76	29	23	14	1	9	6	Baton Rouge, La.	35	25	7	2	-	1	1
Paterson, N.J.	37	28	4	4	-	1	3	Corpus Christi, Tex.	59	49	6	3	-	1	1
Philadelphia, Pa.	392	269	69	35	12	6	25	Dallas, Tex.	273	170	55	28	12	8	18
Pittsburgh, Pa.	77	55	18	1	-	3	10	El Paso, Tex.	98	66	14	11	3	4	4
Reading, Pa.	41	36	1	2	2	-	11	Ft. Worth, Tex.	119	75	25	9	5	5	8
Rochester, N.Y.	115	95	13	5	1	1	8	Houston, Tex.	417	211	97	61	34	14	29
Schenectady, N.Y.	30	25	3	2	-	-	-	Little Rock, Ark.	72	49	12	5	2	4	6
Scranton, Pa.	27	23	2	2	-	-	1	New Orleans, La.	169	110	32	15	11	1	-
Syracuse, N.Y.	106	84	15	3	1	3	7	San Antonio, Tex.	248	168	47	20	8	5	23
Trenton, N.J.	56	36	13	7	-	-	7	Shreveport, La.	77	59	8	7	2	1	7
Utica, N.Y.	21	16	3	1	1	-	6	Tulsa, Okla.	155	122	24	7	1	1	19
Yonkers, N.Y.	32	25	5	1	1	-	6	MOUNTAIN	818	526	158	71	25	38	63
E.N. CENTRAL	2,429	1,548	454	248	88	91	161	Albuquerque, N.M.	79	53	9	13	2	2	6
Akron, Ohio	59	40	15	3	-	1	5	Colo. Springs, Colo.	64	39	8	5	4	8	4
Canton, Ohio	45	31	9	5	-	-	5	Denver, Colo.	120	66	25	12	3	14	20
Chicago, Ill.	500	182	101	115	52	50	16	Las Vegas, Nev.	148	95	35	12	4	2	9
Cincinnati, Ohio	201	135	46	13	2	5	19	Ogden, Utah	25	17	4	1	3	-	1
Cleveland, Ohio	155	103	23	16	3	10	6	Pueblo, Colo.	176	112	44	13	3	4	2
Columbus, Ohio	154	101	36	14	-	3	8	San Diego, Calif.	21	18	1	2	-	-	3
Dayton, Ohio	135	98	25	6	4	2	16	Salt Lake City, Utah	41	25	7	4	1	4	7
Detroit, Mich.	225	142	43	26	10	4	9	Tucson, Ariz.	144	101	25	9	5	4	11
Evansville, Ind.	55	41	12	2	-	-	3	PACIFIC	2,411	1,642	378	231	92	57	201
Fort Wayne, Ind.	77	62	9	3	-	3	7	Berkeley, Calif.	17	12	1	4	-	-	1
Gary, Ind.	24	16	7	3	-	1	1	Fresno, Calif.	96	69	16	4	3	4	8
Grand Rapids, Mich.	69	53	6	5	1	4	9	Glendale, Calif.	41	36	4	-	-	-	3
Indianapolis, Ind.	198	126	43	19	6	4	20	Honolulu, Hawaii	67	53	8	2	3	1	5
Madison, Wis.	37	25	6	4	2	-	2	Long Beach, Calif.	122	85	18	14	2	3	25
Milwaukee, Wis.	126	101	19	4	-	2	16	Los Angeles, Calif.	617	398	97	81	29	4	48
Peoria, Ill.	53	37	7	5	4	-	2	Pasadena, Calif.	38	28	8	-	1	1	4
Rockford, Ill.	81	51	8	1	-	-	2	Portland, Ore.	263	159	28	16	9	11	18
South Bend, Ind.	56	47	5	3	-	3	3	Sacramento, Calif.	192	140	30	13	5	4	18
Toledo, Ohio	142	114	21	6	-	1	14	San Diego, Calif.	202	130	35	22	10	5	29
Youngstown, Ohio	58	43	13	1	-	1	4	San Francisco, Calif.	210	113	33	37	18	7	1
W.N. CENTRAL	916	669	138	59	21	29	64	San Jose, Calif.	223	152	41	14	7	9	25
Des Moines, Iowa	97	68	21	3	1	4	6	Santa Cruz, Calif.	27	19	2	5	1	-	4
Duluth, Minn.	33	21	2	2	-	-	4	Seattle, Wash.	138	93	28	10	2	5	3
Kansas City, Kans.	31	29	3	5	1	1	-	Spokane, Wash.	56	43	9	4	-	3	3
Kansas City, Mo.	108	78	14	8	2	6	11	Tacoma, Wash.	102	72	20	5	2	3	6
Lincoln, Nebr.	24	15	4	3	1	1	4	TOTAL	14,226 ³	9,489	2,544	1,323	441	416	1,020
Minneapolis, Minn.	229	166	39	17	5	2	13								
Omaha, Nebr.	96	73	11	6	3	3	6								
St. Louis, Mo.	195	110	26	10	3	6	4								
St. Paul, Minn.	78	61	10	3	2	2	13								
Wichita, Kans.	65	48	8	2	3	4	3								

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

¹Pneumonia and influenza.

²Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week.

Complete counts will be available in 4 to 6 weeks.

³Total includes unknown ages.

U: Unavailable

Tuberculous Infection — Continued

estimate is consistent with other reports regarding the occurrence of TB in Hispanics in the United States. For example, in 1980, of 88,971 Cuban refugees who received chest radiographs as part of a health screening examination, 0.5% had active or suspected active TB, and 1.4% had suspected inactive TB (4). In 1990, the TB case rate for all Hispanics in the United States was 21.4 per 100,000, five times the rate of 4.2 per 100,000 for non-Hispanic whites (CDC, unpublished data).

In this study, the prevalence rates of tuberculous infection for Cubans were higher for males, persons born in Cuba, and persons who smoked. In general, males are at higher risk for tuberculous infection because of environmental factors (e.g., working with others who are infected with TB, living in crowded conditions) (5). In 1982, the incidence of TB in Cuba was 8.1 per 100,000 population (World Health Organization, unpublished data). Although cigarette smoking has been associated with TB (6,7), it is unclear whether smoking may increase the risk for tuberculous infection or may increase the likelihood of clinical TB after infection.

To help meet the national goal to eliminate TB (a case rate of less than 1 per million population by the year 2010, with an interim target of a case rate of 3.5 per 100,000 population by the year 2000 [8]), culturally appropriate strategies must be developed to prevent and control TB among Hispanics in the United States and other groups at increased risk for TB. Such strategies should emphasize 1) early identification and appropriate treatment of active cases and 2) systematic screening for tuberculous infection and preventive therapy among Hispanics in the United States at high risk for TB.

References

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*Current Trends***Infant Mortality — United States, 1989**

In 1989, the infant mortality rate for the United States—9.8 infant deaths per 1000 live births—was the lowest final rate ever recorded; the previous low (10.0 per 1000 live births) was recorded in 1988 (Figure 1). However, the infant mortality rate in the United States remains higher than that in many other developed countries. This report summarizes 1989 infant mortality data based on information from death certificates compiled through the Vital Statistics System of CDC's National Center for Health Statistics (NCHS) (1) and compares findings with those for 1988.

Infant Mortality — Continued

In this report, cause-of-death statistics are based on the underlying cause of death* reported on the death certificate by the attending physician, medical examiner, or coroner in a manner specified by the World Health Organization and endorsed by CDC. In 1989, NCHS changed the method of tabulating live births from race of child to race of mother (2). Because the number of live births comprises the denominator of infant mortality rates, 1989 rates by race of mother for specific race groups are not comparable with those of previous years. For this report, data for 1989 were tabulated by both race of child and race of mother. Comparison of changes in rates from 1988 to 1989 are based on the number of live births tabulated by race of child.

In 1989, the mortality rates (by race of mother) for white† and black† infants were 8.1 and 18.6 per 1000 live births, respectively. For white infants, the rate (by race of child) in 1989 (8.2 per 1000 live births) was 4% lower than the rate from the previous year (8.5); for black infants, the rate (by race of child) was 17.7 in 1989, compared with 17.6 in 1988.

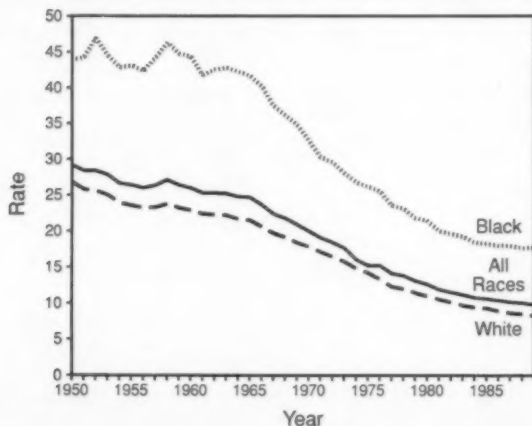
From 1988 to 1989, the neonatal (infants <28 days of age) mortality rate declined from 6.3 to 6.2 deaths per 1000 live births. In 1989, the neonatal mortality rates (by race of mother) for white and black infants were 5.1 and 11.9 per 1000 live births, respectively. For white infants, the rate (by race of child) in 1989 (5.2) was 4% lower than the 1988 rate (5.4); for black infants, the rate (by race of child) was 11.3 in 1989, compared with 11.5 in 1988.

In 1989, the overall postneonatal (infants aged 28 days–11 months) mortality rate was 3.6 per 1000 live births for the fourth consecutive year. The rates (by race of

*Defined by the World Health Organization's *International Classification of Diseases, Ninth Revision* (ICD-9) as "(a) the disease or injury which initiated the train of morbid events leading directly to death, or (b) the circumstances of the accident or violence which produced the fatal injury."

†Includes Hispanic and non-Hispanic infants.

FIGURE 1. Infant mortality rates,* by race† of child — United States, 1950–1989



*Per 1000 live births.

†Includes Hispanic and non-Hispanic infants.

Infant Mortality — Continued

mother) were 2.9 and 6.7 per 1000 live births for white and black infants, respectively. The 1989 rate (by race of child) for white infants (3.0) was 3% lower than the 1988 rate (3.1); the rate (by race of child) for black infants was 6.4 in 1989, compared with 6.2 in 1988.

From 1988 to 1989, among the 10 leading causes of death, the largest increases were for disorders relating to short gestation and unspecified low birthweight (LBW) (16%); respiratory distress syndrome (10%); and newborn affected by maternal complications of pregnancy and newborn affected by complications of placenta, cord, and membranes (5% each). The largest decreases were for intrauterine hypoxia and birth asphyxia (10%), and congenital anomalies and pneumonia and influenza (4% each).

The rank order of the 10 leading causes of infant death differed by race (Table 1). For white infants, the leading cause of death was congenital anomalies (197.7 deaths per 100,000 live births), accounting for nearly 25% of all deaths among white infants. For black infants, the leading cause of death was disorders relating to short gestation and unspecified LBW (277.4 deaths per 100,000 live births), accounting for 15% of all deaths among black infants. The first four leading causes of death accounted for 56% of all infant deaths among whites and 49% of all infant deaths among blacks; the remaining six leading causes accounted for 15% or less of infant deaths for each race group.

In 1989, the risk of dying within the first year of life was 2.3 times greater for black than for white infants, and for all of the leading causes of death, the risk was higher for black than for white infants; however, there were large variations by cause. The causes of death with the highest black-to-white rate ratios were disorders relating to short gestation and unspecified LBW (4.5:1); accidents⁵ and adverse effects (2.6:1); and pneumonia and influenza, newborn affected by maternal complications of pregnancy, and infections specific to the perinatal period (2.5:1 each). The causes with the lowest ratios were congenital anomalies (1.1:1) and sudden infant death syndrome and newborn affected by complications of placenta, cord, and membranes (2.0:1 each).

Three of the 10 leading causes of infant death accounted for 41% of the difference in infant mortality between black and white infants: disorders relating to short gestation and unspecified LBW, 20%; sudden infant death syndrome, 12%; and respiratory distress syndrome, 9%.

Reported by: Div of Vital Statistics, National Center for Health Statistics, CDC.

Editorial Note: Infant mortality is one of the most widely used general indices of health in the United States and other countries. During the 1970s, the infant mortality rate in the United States declined rapidly (by an average of 4.7% per year). The rate of decline slowed during the 1980s, to an annual average of 2.8%. In 1987 (the latest year these data are available), the United States ranked 24th in the world in infant mortality (3), compared with 20th in 1980 (4).

Since the mid-1970s, the ratio of mortality rates between black and white infants has steadily increased—primarily because the mortality rate for black infants has declined more slowly than that for white infants. The ratio of black-to-white infant mortality increased from 1.8:1 during the early 1970s, to 2.1:1 in 1987 and 1988, and 2.2:1 in 1989, based on rates computed from the number of live births by race of child.

⁵When a death occurs under "accidental" circumstances, the preferred term within the public health community is "unintentional injury."

Infant Mortality — Continued

TABLE 1. Number of infant deaths, mortality rate, and percentage of deaths attributed to each cause, by race — United States, 1989

Race/Rank order	Cause of death (ICD-9 codes)	No.	Rate*	% Distribution
BLACK				
1	Disorders relating to short gestation and unspecified low birth weight (765)	1,867	277.4	14.9
2	Sudden infant death syndrome (798.0)	1,617	240.2	12.9
3	Congenital anomalies (740–759)	1,498	222.5	12.0
4	Respiratory distress syndrome (769)	1,159	172.2	9.3
5	Newborn affected by maternal complications of pregnancy (761)	516	76.7	4.1
6	Accidents† and adverse effects (E800–E949)	335	49.8	2.7
7	Infections specific to the perinatal period (771)	300	44.6	2.4
8	Newborn affected by complications of placenta, cord, and membranes (762)	288	42.8	2.3
9	Intrauterine hypoxia and birth asphyxia (768)	227	33.7	1.8
10	Pneumonia and influenza (480–487)	210	31.2	1.7
	All other causes (residual)	4,510	670.0	36.0
All causes		12,527	1,861.0	100.0
WHITE				
1	Congenital anomalies (740–759)	6,312	197.7	24.5
2	Sudden infant death syndrome (798.0)	3,773	118.2	14.6
3	Respiratory distress syndrome (769)	2,384	74.7	9.2
4	Disorders relating to short gestation and unspecified low birth weight (765)	1,981	62.1	7.7
5	Newborn affected by maternal complications of pregnancy (761)	987	30.9	3.8
6	Newborn affected by complications of placenta, cord, and membranes (762)	672	21.1	2.6
7	Accidents† and adverse effects (E800–E949)	614	19.2	2.4
8	Infections specific to the perinatal period (771)	571	17.9	2.2
9	Intrauterine hypoxia and birth asphyxia (768)	466	14.6	1.8
10	Pneumonia and influenza (480–487)	396	12.4	1.5
	All other causes (residual)	7,638	239.3	29.6
All causes		25,794	808.0	100.0
TOTAL‡				
1	Congenital anomalies (740–759)	8,120	200.9	20.5
2	Sudden infant death syndrome (798.0)	5,634	139.4	14.2
3	Disorders relating to short gestation and unspecified low birth weight (765)	3,931	97.3	9.9
4	Respiratory distress syndrome (769)	3,631	89.9	9.2
5	Newborn affected by maternal complications of pregnancy (761)	1,534	38.0	3.9
6	Accidents† and adverse effects (E800–E949)	996	24.6	2.5
7	Newborn affected by complications of placenta, cord, and membranes (762)	984	24.4	2.5
8	Infections specific to the perinatal period (771)	892	22.1	2.2
9	Intrauterine hypoxia and birth asphyxia (768)	725	17.9	1.8
10	Pneumonia and influenza (480–487)	636	15.7	1.6
	All other causes (residual)	12,572	311.1	31.7
All causes		39,655	981.3	100.0

*Deaths at <1 year of age per 100,000 live births in the specified group.

†When a death occurs under "accidental" circumstances, the preferred term within the public health community is "unintentional injury."

‡Includes races other than black and white.

Infant Mortality — Continued

The downward trend in overall infant mortality has slowed since 1981 for the black population; for white infants, before the 4% decline from 1988 through 1989, the rate of decline had slowed since the late 1970s. Since 1960, neonatal mortality rates have decreased for both races, but the rate of decline was more rapid for white (4%) than for black infants (3%). However, from 1960 through 1989, the rate of decline in postneonatal mortality was faster for black (3%) than for white infants (2%).

One of the national health objectives for the year 2000 is to reduce the infant mortality rate for the total population to ≤ 7 infant deaths per 1000 live births, and for the black population to ≤ 11 (5). If the average annual decline of 2.8% for the total population during the 1980s continues, the overall infant mortality objective for the year 2000 will be achieved. However, for the black population, the year 2000 objective for infant mortality is unlikely to be met if current trends continue. For the objective to be met, the rate of decline of 2.1% per year for black infants from 1980 to 1989 would need to double from 1989 to 2000.

Current efforts to reduce infant mortality include expanding access to prenatal care for low income families through changes in Medicaid eligibility. Increased use of prenatal care is likely to have greatest impact on neonatal deaths resulting from causes other than birth defects. Because the underlying etiologies of some of the major causes of neonatal death (particularly birth defects and preterm delivery) are poorly understood, these problems are high priorities for research efforts. Most postneonatal deaths resulting from "pneumonia and influenza" (ICD-9 codes 480–487) and "accidents and adverse effects" (ICD-9 codes E800–E949) are preventable with current knowledge. To prevent these deaths, programmatic efforts need to emphasize well-baby care and parenting skills. However, strategies to prevent the leading cause of postneonatal death—sudden infant death syndrome—will require identification of the underlying pathologic mechanisms for this problem.

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*Surveillance Summaries***Publication of CDC Surveillance Summaries**

Since 1983, CDC has published the *CDC Surveillance Summaries* under separate cover as part of the *MMWR* Series. Each report published in the *CDC Surveillance Summaries* focuses on public health surveillance; surveillance findings were reported for a broad range of risk factors and health conditions.

Surveillance Summaries — Continued

Summaries for each of the reports published in the most recent (December 1991) issue of the *CDC Surveillance Summaries* (1) are provided below. All subscribers to *MMWR* receive the *CDC Surveillance Summaries*, as well as the *MMWR Recommendations and Reports*, as part of their subscriptions.

WATERBORNE-DISEASE OUTBREAKS, 1989-1990

For the 2-year period 1989-1990, 16 states reported 26 outbreaks due to water intended for drinking; an estimated total of 4288 persons became ill in these outbreaks. *Giardia lamblia* was implicated as the etiologic agent for seven of the 12 outbreaks for which an agent was identified. The outbreaks of giardiasis were all associated with ingestion of unfiltered surface water or surface-influenced groundwater. An outbreak with four deaths was attributed to *Escherichia coli* O157:H7, the only bacterial pathogen implicated in any of the outbreak investigations. An outbreak of remitting, relapsing diarrhea was associated with cyanobacteria (blue-green algae)-like bodies, whose role in causing diarrheal illness is being studied. Two outbreaks due to hepatitis A and one due to a Norwalk-like agent were associated with use of well water. Eighteen states reported a total of 30 outbreaks due to the use of recreational water, which resulted in illness among an estimated total of 1062 persons. These 30 reports comprised 13 outbreaks of whirlpool or hot tub-associated *Pseudomonas* folliculitis; 13 outbreaks of swimming-associated gastroenteritis, including five outbreaks of shigellosis; one outbreak of hepatitis A associated with a swimming pool; and three cases of primary amebic meningoencephalitis caused by *Naegleria*. The national surveillance of outbreaks of waterborne diseases, which has proceeded for 2 decades, continues to be a useful means for characterizing the epidemiology of waterborne diseases.

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TUBERCULOSIS MORBIDITY IN THE UNITED STATES: FINAL DATA, 1990

The number of tuberculosis cases reported to CDC has been increasing since 1988, after a long historic decline. In 1990, 25,701 cases were reported, an increase of 9.4% over the 1989 figure and the largest annual increase since 1953. From 1985 to 1990, reported cases increased by 15.8%. Disproportionately greater increases in reported cases occurred among Hispanics, non-Hispanic blacks, and Asians/Pacific Islanders. In contrast, decreases were observed among non-Hispanic whites and American Indians/Alaskan Natives. By age, the largest increase in reported cases occurred in the 25- to 44-year age group; this increase may be largely attributable to rising numbers of tuberculosis cases among persons with human immunodeficiency virus infection or acquired immunodeficiency syndrome. Notable increases also occurred among children. The proportion of cases among foreign-born persons has risen steadily, from 21.6% in 1986 to 24.4% in 1990.

Authors: John A. Jereb, M.D., Gloria D. Kelly, Samuel W. Dooley, Jr., M.D., George M. Cauthen, Sc.D., Dixie E. Snider, Jr., M.D., M.P.H., *Division of Tuberculosis Elimination, National Center for Prevention Services, CDC*.

Surveillance Summaries — Continued

REGIONAL AND TEMPORAL TRENDS IN THE SURVEILLANCE OF SYPHILIS, UNITED STATES, 1986–1990

During the latter half of the 1980s, an epidemic of syphilis occurred throughout the United States. A comparison of regional rates of primary and secondary syphilis in 1990 indicated that the rates were highest in the South, followed by the Northeast, the West, and the Midwest. Primary and secondary syphilis rates from 1986 through 1990 exhibited different regional patterns. Rates of primary and secondary syphilis in the West peaked in 1987 and declined from 1987 to 1990. Rates increased in the Northeast and the South from 1986 to 1990, but the increase reached a plateau in the Northeast in 1990. Rates did not begin to increase in the Midwest until 1988. More detailed analyses of the syphilis epidemics in the specific communities in each region are needed to better understand the regional patterns. A comparison of these findings across regions could be helpful in evaluating which sexually transmitted disease intervention and control programs are most effective during epidemic periods.

Authors: Linda A. Webster, Ph.D., Robert T. Rolfs, M.D., Allyn K. Nakashima, M.D., Joel R. Greenspan, M.D., M.P.H., Division of Sexually Transmitted Diseases/HIV Prevention, National Center for Prevention Services, CDC.

TRICHINOSIS SURVEILLANCE, UNITED STATES, 1987–1990

Since the Public Health Service began recording statistics on trichinosis in 1947, the number of cases reported by state health departments each year has declined. In the late 1940s, health departments reported an average of 400 cases and 10–15 deaths each year; from 1982 through 1986, the number declined to an average of 57 cases per year and a total of three deaths for the period.

From 1987 through 1990, 206 cases of trichinosis from 22 states, including 14 multiple-case outbreaks, were reported to CDC. In 1990, two large outbreaks associated with commercial pork accounted for 106 cases.

In the 192 instances in which a suspect food item was identified, pork was implicated in 144 (75%) cases, walrus meat in 34 (18%), and bear meat in 14 (7%). Sausage, the most frequently implicated pork product, was associated with 128 of the 139 cases for which a form of ingested pork was specified. Before 1990, the proportion of cases of trichinosis attributable to consumption of commercial pork had declined steadily. This decline was probably due to a combination of factors, including laws prohibiting the feeding of garbage to hogs, the increased use of home freezers, and the practice of thoroughly cooking pork.

Although the incidence of trichinosis has decreased substantially since national reporting was initiated in 1947, a dramatic increase in 1990, resulting from two large outbreaks, emphasizes the need for further education and control measures.

Authors: James B. McAuley, M.D., M.P.H., Marco K. Michelson, M.D., Peter M. Schantz, V.M.D., Ph.D., Parasitic Diseases Branch, Division of Parasitic Diseases, National Center for Infectious Diseases, CDC.

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